M-eux Test – The mobile device automation tool:

Re-use the automation script across different models of mobile devices.

Re-use the automation script across different versions of the system under test.

Create and maintain the automation script in an easy, user-friendly way.

Re-use automation expertise and automation investment from the PC world.

Re-use the favorite development environment for creation of functional test cases.

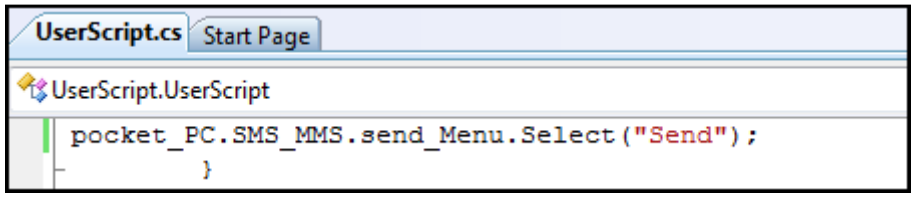
Gain instant ROI by applying M-eux Test for mobile test automation.

M-eux Test: extends Visual Studio for automated testing of mobile applications.

GUI-Object recognition

M-eux Test recognizes the Graphical User Interface (GUI) objects on the device as a normal end-user is recognizing a window, a menu, a list, a button, etc. The script generated by M-eux Test shows the manipulation of the GUI objects that appeared on the screen of the mobile Device.

The script is easy to create, i.e. the tool supports recording mode. The created test scripts are easy to read and to maintain. The script is created inside a C# project using the object oriented features of .Net. The statements describe the user actions whereby a GUI object is defined by a C# object.



The replay of the statement of the above figure will search on the “pocket_PC” device for the SMS window. When the window is found, the tool will press on the “send” option on the menu bar.
Using GUI-objects, the test script is:

1. Re-usable across different: the tool detects automatically the GUI objects independently from the screen resolution or settings of the device. The actions are executed independently from the physical position of the hardware keys on the device.
2. Independent from the look and feel. Font size, color settings and other UI settings will not break the correct execution of the test script
3. re-usable across different versions: The scripts can be re-used for regression testing with a minimum of maintenance
4. independent from the CPU power of the device thanks to implicit synchronization on the GUI objects

Device Replay functions

Pre-defined functions are available to verify the status of the Mobile Operating System, the wireless connections of the device, the hardware of the device, its memory and its SD card.

M-eux Test – The mobile device automation tool:

Extends well known tools like QuickTest Profession from HP and Visual Studio from Microsoft

Supports the real actual device for test script creation and replay.

One script can replay against multiple devices. For example one script can send a SMS from one device and check the correct arrival on a second device.

Supports access to devices located remotely using the WAN connector.

Contains a local scheduler to plan the execution of test cases against the connected devices.

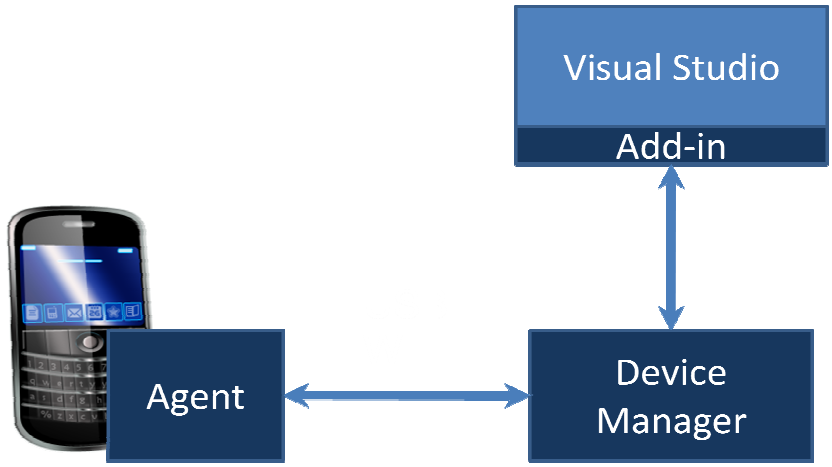
Support the real device and the emulators. Create one scripts and re-use for all devices running the same Mobile Operating System.

Monitoring functions measures the setup of voice call, the sending and receiving of SMS, MMS and e-mail messages.

Visual Studio (*)

Visual Studio is the leading development environment from Microsoft. Visual Studio C# is the ideal environment for productively building object oriented applications for Windows Mobile on the .NET Compact Framework. Using the M-eux Test extension for Visual Studio, the test developer can create his/her test scripts in a C# project.
M-eux Test supports Visual Studio 2005sp1 and Visual Studio 2008sp1.

The architecture of the extension is shown in following figure:



An agent is installed on the mobile device. The agent is responsible for the recording and the replay of the test commands The Device is connected to the PC using either WIFI or a USB connection. The Device Manager is the gateway between the connected devices and the extension inside Visual Studio. The architecture allows the connection of multiple devices. One test script can execute against multiple devices.

Supported devices

Any device running one of the following operating systems can be used to implement or execute the test cases.

Device Operating System	Supported versions
Windows Mobile	• Windows Mobile 2003 Pocket PC second edition • Windows Mobile 2005 Pocket PC • Windows Mobile 6.0, 6.1 and 6.5 o Classic, Standard Professional
Windows CE	• Windows CE 5.0 • Windows CE 6.0
Android	• Android 1.5 • Android 1.6 • Android 2.0

(*) Visual Studio is a product from Microsoft.

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